

AMENDMENTS TO THE DRAWINGS

Please add new Figure 4, provided on a New Drawing Sheet attached herewith. No new matter has been added, as antecedent support can be found in the application as originally filed, such as at paragraph [0020] for example.

Replacement Sheets 1 and 2, providing new sheet numbers are attached herewith.

REMARKS / ARGUMENTS

Status of Claims

Claims 1-54 are pending in the application. Claims 1-54 stand rejected. Applicant has amended Claims 1 and 52-54, cancelled Claim 51, and added new Claim 55, leaving Claims 1-50, and 52-55 for consideration upon entry of the present Amendment.

Applicant respectfully submits that the Examiner's rejections under 35 U.S.C. §112, first paragraph, 35 U.S.C. §112, second paragraph, and 35 U.S.C. §101, have been traversed, that no new matter has been entered, and that the application is in condition for allowance.

Drawings

The Examiner has objected to the drawings, for failing to show the several "computer readable means for causing..." as recited in Claims 51-53 and the several "program of instructions embodied in a medium for causing ..." as recited in Claim 54.

Applicant has attached herewith a New Drawing Sheet depicting new Figure 4.

No new matter has been added, as antecedent support may be found in the application as originally filed, such as at Paragraph [0020] for example. Applicant respectfully submits that Paragraph [0020] describes "...a scanner type radiography apparatus (item 400) used to acquire images of an object (item 401)... The sensor/detector produces a digital image that can be viewed on a screen, (item 402) printed, and/or processed by a computer (item 403) or any apparatus comprising processing circuits. The method is recorded in a memory (item 404) in the form of instruction codes..."

The specification has been amended to include reference numerals corresponding to the elements depicted in Figure 4.

Accordingly, Applicant respectfully submits that the drawing objections have been addressed, and requests reconsideration and withdrawal of this objection.

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. Specifically, the Examiner alleges that the specification fails to provide proper antecedent basis for the various elements in modified means plus function format in Claims 51-53, the computer program product in Claim 52, the article of manufacture in Claim 53, and the program storage device of Claim 54.

Applicant respectfully disagrees for the following reasons.

The meaning of every term used in any of the claims should be apparent from the descriptive portion of the specification with clear disclosure as to its import. MPEP §608.01(o)

Applicant has cancelled Claim 51.

Regarding Claim 52

Applicant respectfully submits that it would be apparent to one having ordinary skill in the art from the disclosure of Paragraph [0020] that “...The method is ***recorded in a memory in the form of instruction codes*** and implemented by a microprocessor...” provides antecedent support for the claimed “...computer readable program code means embodied in the medium...”. Specifically, the claimed “computer readable program code means” are the disclosed “instruction codes”, and that the claimed “...embodied in the medium...” is supported by disclosure of the instruction codes being “...recorded in a memory...”. Additionally, Applicant respectfully submits that it would be apparent to one of skill in the art that disclosure of Paragraph [0020], specifically “...The method is ***recorded in a memory in the form of instruction codes*** and implemented by a microprocessor...” provides antecedent support for the claimed computer program product, which is the instruction codes recorded in the memory.

Regarding Claim 53

As set forth above, Applicant respectfully submits that description within the specification of the instruction codes, recorded in the memory, provides antecedent support for the claimed “...computer readable program code means embodied in a medium...”. Applicant further submits that it would be apparent to one of skill in the art

the claimed article of manufacture, as claimed for in Claim 53, is supported in Paragraph [0020] of the specification, specifically “...The method is ***recorded in a memory*** in the form of instruction codes and implemented by a microprocessor...”. Applicant respectfully submits that it would be apparent that the memory described in Paragraph [0020] is the claimed article of manufacture for use with a computer system, the article of manufacture (memory) comprising a computer readable medium (memory circuits) having computer readable program code means (a method in the form of instructions) embodied in the medium (the memory), as claimed for in Claim 53.

Regarding Claim 54

Applicant respectfully submits that it would be apparent that the program storage device, as claimed, is described in Paragraph [0020] of the specification, specifically “...The method is ***recorded in a memory*** in the form of instruction codes and implemented by a microprocessor...”. Applicant submits that the claimed program storage device (a memory) embodies a program of instructions (instruction codes) to perform steps of a method, (the method is recorded in the memory), as claimed for in Claim 54.

Applicant respectfully submits that the meaning of every term used in the claims is apparent from the descriptive portion of the specification with clear disclosure as to its import, and that the specification provides antecedent basis for the claimed subject matter. Accordingly, Applicant respectfully requests reconsideration and withdrawal of these objections, which Applicant considers to be traversed.

Rejections Under 35 U.S.C. §112, First Paragraph

Claims 51-54 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. The Examiner alleges that the claims contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The Examiner alleges that the disclosure and drawings fail to provide clear and adequate support for making and using the various elements as recited.

Applicant has Cancelled Claim 51.

Appellant respectfully disagrees with the Examiner's rejections for the following reasons.

Regarding Claim 52

Applicant respectfully submits that description within the specification at Paragraph [0020] of the instruction codes, recorded in the memory (item 404 of Figure 4), are described in such a way that one skilled in the computer processing art would be enabled to utilize such memory as the medium in which to embody the claimed "...computer readable program code means embodied in the medium...".

Regarding Claim 53

Applicant respectfully submits that the claimed article of manufacture, as claimed for in Claim 53, is described in Paragraph [0020] of the specification, specifically "...The method is ***recorded in a memory*** in the form of instruction codes and implemented by a microprocessor...". Applicant respectfully submits one skilled in the computer processing art would recognize and be enabled to utilize such memory, described in Paragraph [0020] and depicted as item 404 of Figure 4, as the claimed article of manufacture for use with a computer system, the article having computer readable program code means (a method in the form of instructions) embodied in the medium (the memory).

Regarding Claim 54

The Examiner alleges that the disclosure and drawings fail to provide clear and adequate support for making and using a program storage device readable by a machine tangibly embodying a program of instructions executable by the machine, and fail to provide clear and adequate support for the various elements for the program of instructions embodied in the medium for causing the machine to provide for.

Applicant respectfully submits that one skilled in the computer processing art would be enabled to utilize such memory, described in Paragraph [0020] and depicted as item 404 of Figure 4 as the program storage device for use with a computer system, the

program storage device (memory) tangibly embodying the program of instructions (instruction codes) executable by the computer to perform the steps of the method.

In view of the foregoing, Applicant respectfully submits that the specification provides general guidelines as to the scope of the invention such that one of ordinary skill in the art would know what was meant, and that the subject matter of the invention has been described and is supported in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention and provided an enabling disclosure thereof, and therefore respectfully requests reconsideration and withdrawal of all rejections under 35 U.S.C. §112, first paragraph.

Rejections Under 35 U.S.C. §112, Second Paragraph

Claim 53 stands rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicant regards as the invention.

The Examiner comments that the phrase “the same processing operations” lacks antecedent basis and is vague and indefinite.

Applicant has amended Claim 53 to now recite “...the same *computing and discriminating* processing operations...” to particularly point out the processing operations, and provide uniformity with the same amendment previously presented in other claims.

No new matter has been added, as antecedent support may be found in the application as originally filed, such as the originally filed claims for example.

In view of the foregoing, Applicant respectfully submits that the claimed subject matter is described in such a manner that reasonably conveys to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. Accordingly, Applicant respectfully requests the Examiner to reconsider and withdraw this rejection, which Applicant considers to be overcome.

Rejections Under 35 U.S.C. §101

Claims 1-54 stand rejected under 35 U.S.C. §101, because the claimed invention is allegedly directed to non-statutory subject matter.

Regarding Claims 1-50

The Examiner alleges that the claims are directed to a mathematical algorithm or abstract idea without any practical application that produces a tangible, concrete and useful result.

Applicant traverses these rejections for the following reasons.

In accordance with the Official Gazette Notice of November 22, 2005:

The tangible requirement does not necessarily mean that a claim must either be tied to a particular machine or apparatus or must operate to change articles or materials to a different state or thing. However, the tangible requirement does require that the claim must recite more than a Sec. 101 judicial exception, in that the process claim must set forth a practical application of that Sec. 101 judicial exception to produce a real-world result. *Benson*, 409 U.S. at 71-72, 175 USPQ at 676-77 (invention ineligible because had "no substantial practical application."). "[A]n application of a law of nature or mathematical formula to a . . . process may well be deserving of patent protection." *Diehr*, 450 U.S. at 187, 209 USPQ at 8 (emphasis added); see also *Corning*, 56 U.S. (15 How.) at 268, 14 L.Ed. 683 ("It is for the discovery or invention of some practical method or means of producing a beneficial result or effect, that a patent is granted . . ."). In other words, the opposite meaning of "tangible" is "abstract."

Applicant has amended Claim 1 to now recite, inter alia: "*...producing an image in which noise has been reduced based upon the noise function...*". No new matter has been added as antecedent support may be found in the application as originally filed, such as at Paragraph [0044] for example.

In view of the foregoing, Applicant submits that a tangible, concrete, and useful result with association to a real-world environment is set forth in the now amended claim. For example, *producing an image* provides a concrete and tangible result, while the *reduction in noise* provides a useful result in that it results in improved radiography

diagnosis.

Accordingly, Applicant respectfully requests the Examiner to reconsider and withdraw this rejection under 35 U.S.C. §101, which Applicant considers to be overcome.

Regarding Claim 52

The Examiner alleges that the element computer program product is not supported by the specification and the drawings, and should be deleted.

Applicant respectfully disagrees.

Applicant respectfully submits, as set forth above, that disclosure in Paragraph [0020] of “The method is recorded in a memory in the form of instruction codes...”, and depiction in Figure 4 (as item 404) of the memory supports the claimed computer program product. Specifically, Applicant submits that the claimed: computer program product (memory having instruction codes recorded therein), comprising a computer useable medium (memory) having computer readable program code means embodied in the medium (instruction codes recorded in the memory) is supported by the disclosure within the specification and drawings.

Notwithstanding the above, in order to further this application to allowance Applicant has amended Claim 52 to delete the words “computer readable program code means for causing a computer to provide for...” as suggested by the Examiner.

Furthermore, as set forth above regarding Claims 1-50, Applicant has amended Claim 52 to now recite, inter alia: “...producing a filtered image in which noise has been reduced based upon the noise function...”, and submits that for at least the same reasons, Claim 52 is now directed to allowable subject matter.

Accordingly, Applicant respectfully requests the Examiner to reconsider and withdraw this rejection under 35 U.S.C. §101, which Applicant considers to be overcome

Regarding Claim 53

The Examiner alleges that the element article of manufacture is not supported by the specification and drawings and should be deleted from the claim.

Applicant respectfully disagrees.

Applicant respectfully submits that memory is an article of manufacture, and that as set forth above, disclosure in Paragraph [0020] of “The method is recorded in a memory in the form of instruction codes...”, and depiction in Figure 4 (item 404) of the memory supports the claimed article of manufacture. Specifically, Applicant submits that the claimed: article of manufacture (memory having instruction codes recorded therein) for use with a computer system, comprising a computer readable medium (memory) having computer readable program code means embodied in the medium (instruction codes recorded in the memory) is supported by the disclosure within the specification and drawings.

Furthermore, as set forth above regarding Claims 1-50, Applicant has amended Claim 53 to now recite, inter alia: “...producing a filtered image in which noise has been reduced based upon the noise function...”, and submits that for at least the same reasons, Claim 53 is now directed to allowable subject matter.

Accordingly, Applicant respectfully requests the Examiner to reconsider and withdraw this rejection under 35 U.S.C. §101, which Applicant considers to be overcome.

Regarding Claim 54

The Examiner alleges that Claim 54 recites a computer program per se. For example the program storage device is not defined in the disclosure nor the claim as a computer readable storage device. Furthermore the machine is not defined in the disclosure nor the claim as a computer processing system. Also the medium is not defined in the disclosure nor the claim as a computer readable medium.

Applicant respectfully disagrees.

Applicant respectfully submits that disclosure of the specification, at Paragraph [0020] “The sensor/detector produces a digital image that can be viewed on a screen, printed, and/or processed by *a computer, or any apparatus comprising processing circuits*. The method is recorded in a memory in the form of instruction codes and implemented by a *microprocessor*...” would indicate to one having ordinary skill in the art of computer processing that the claimed “machine” is a computer system.

Further, Applicant respectfully submits that one of ordinary skill in the art would recognize that the claimed program storage device, readable by a “machine” tangibly embodying a program of instructions executable by the “machine” to perform steps of a method, is a computer readable storage device.

Notwithstanding the above, in order to further this application to allowance, Applicant has amended Claim 54 to claim “...a program storage device readable by a *computer* tangibly embodying a program of instructions executable by the *computer*...” and to delete the words “the program of instructions embodied in a medium for causing the machine to provide for...” as suggested by the Examiner.

Accordingly, Applicant respectfully requests the Examiner to reconsider and withdraw this rejection under 35 U.S.C. §101, which Applicant considers to be overcome.

In view of the foregoing, Applicant respectfully submits that the claimed invention is directed to statutory subject matter, which provides a concrete, tangible and useful result, and therefore respectfully requests reconsideration and withdrawal of all rejections under 35 U.S.C. §101, which Applicant considers to be overcome.

Regarding New Claim 55

Applicant has added new Claim 55, which depends from Claim 1, to now claim originally disclosed but previously unclaimed subject matter. No new matter has been added as antecedent support may be found in the application as originally filed, such as at Paragraphs [0044] and [0046] for example.

In view of the amendment and remarks set forth above regarding the allowability of Claim 1, Applicant submits that new Claim 55 is directed to allowable subject matter and respectfully requests entry and notice of allowance thereof.

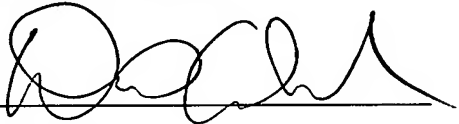
In light of the foregoing, Applicant respectfully submits that the Examiner’s rejections under 35 U.S.C. §112, first paragraph, 35 U.S.C. §112, second paragraph, and 35 U.S.C. §101 have been traversed, that no new matter has been entered, and respectfully requests that the Examiner reconsider and withdraw these rejections.

If a communication with Applicant's Attorneys would assist in advancing this case to allowance, the Examiner is cordially invited to contact the undersigned so that any such issues may be promptly resolved.

The Commissioner is hereby authorized to charge any additional fees that may be required for this amendment, or credit any overpayment, to Deposit Account No. 50-2513.

In the event that an extension of time is required, or may be required in addition to that requested in a petition for extension of time, the Commissioner is requested to grant a petition for that extension of time that is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to the above-identified Deposit Account.

Respectfully submitted,
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